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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,061	12/02/2003	Zugen Ni	33810/US	2571
7590	12/30/2004		EXAMINER	
Min (Amy) S. Xu DORSEY & WHITNEY LLP Intellectual Property Department 50 South Sixth Street, Suite 1500 Minneapolis, MN 55402-1498				SAN MARTIN, EDGARDO
		ART UNIT	PAPER NUMBER	2837
DATE MAILED: 12/30/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/726,061	NI, ZUGEN	
	Examiner Edgardo San Martin	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 02 December 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-8 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/4/04.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_ .

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:
  - The first line of the Abstract is redundant; some words of the Abstract are incomplete, in particular they are missing the letter "e";
  - Some words in the Specification are incomplete, in particular they are missing the letter "e".

Appropriate correction is required.

### ***Claim Objections***

2. Claims 1 – 8 are objected to because of the following informalities:
  - In claims 1, 3, 4 and 8 some words are incomplete, in particular they are missing the letter "e".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 – 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "at its two sides" in line 4. There is insufficient antecedent basis for this limitation in the claim. The claim do not established a physical or geometrical configuration of the expansion chamber as to clearly distinguish a multiplicity of sides.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Shlosberg (US 1,023,225).

The recitation "A silencer for a vacuum cleaner" has been given little patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951). In addition, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

With respect to claim 1, Shlosberg teaches a silencer (Figs.1 – 3), which comprises at least one hermetic expansion chamber (Fig.2) mounted in an exhaust channel and allowing an exhaust airflow to pass through, the expansion chamber having an inlet (Fig.2, Item 5) and an outlet (Fig.2, Item 10) connected to the exhaust channel, and the cross-sectional area of the expansion chamber in the direction perpendicular to the airflow is larger than that of each of the inlet and the outlet (Fig.2).

With respect to claim 2, Shlosberg teaches wherein a silencing board (Fig.2, Item 8) is mounted in the expansion chamber, separating the inlet from the outlet with a plurality of pores (Fig.3, Item 9) distributed throughout in the silencing board (Figs.2 and 3).

With respect to claim 3, Shlosberg teaches wherein the expansion chamber is formed by two halves that are oppositely conjoined to each other at a joint, and the silencing board is fixed at the joint (Fig.2).

With respect to claim 5, Shlosberg teaches wherein the cross- sectional area of the expansion chamber in the direction perpendicular to the airflow is larger than double of that of the outlet (Fig.2).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shlosberg (US 1,023,225).

Shlosberg teach the limitations discussed in a previous rejection, but fail to disclose specific dimensions of the silencer.

The Examiner considers that it would have been an obvious matter of design choice to select specific dimension for the silencer depending upon an application constraint. The Examiner takes Official Notice that it is well known in the art of engineering design to select certain design constraints and parameters that would serve as guides in the process of designing for a specific application.

It would have been an obvious matter of design choice wherein the distances from two inner end faces of the expansion chamber, which contain the inlet and the outlet respectively, to the silencing board are both longer than 10 mm and shorter than 100 mm; and wherein the cross-sectional areas of the inlet and the outlet in the direction perpendicular to the airflow are both less than 5000 mm<sup>2</sup>, since applicant has not disclosed that establishing this dimensions are critical values that solves any stated problem or is for any particular purpose, it appears that the invention would perform equally well with other dimensions, furthermore, a change in size is generally

recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shlosberg (US 1,023,225) in view of Gibel (US 3,688,868).

Shlosberg teach the limitations discussed in a previous rejection, but fail to disclose wherein a noise- absorbing material is attached to inner walls of the expansion chamber.

Nevertheless, Gibel teaches a silencer comprising an expansion chamber (Fig.2, Item 25) and a noise-absorbing material (Fig.2, Item 21) is attached to inner walls of the expansion chamber.

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to attach the Gibel noise-absorbing material to inner walls of the Shlosberg expansion chamber because the noise-absorbing material would help tune the expansion chamber in order to absorb a wider range of sound frequencies increasing the performance of the silencer.

#### ***Allowable Subject Matter***

7. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The attached hereto PTO Form 892 lists prior art made of record that the Examiner considered it pertinent to applicant's disclosure.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571) 272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edgardo San Martín  
Patent Examiner  
Art Unit 2837  
Class 181  
December 27, 2004